AMENDMENTS TO THE SPECIFICATION:

Kindly replace the paragraph bridging pages 17 and 18 with the following amended paragraph:

The distance D between bus A and the fault is a function of U_A, U_B, I_A, I_B, from which also the line parameters are calculated and adapted. From these measurements, which change drastically during the fault, trigger signals for fault detection are generated as well. The fault location and determination calculations are performed according to standard formulae derived from symmetrical component descriptions of the situation for particular faults, such as phase to ground or phase to phase, based on the network equivalent of the line between bus A and bus B as in figure 5. Well-known methods for this purpose are shown in Anderson, P.M. "Analysis of faulted power systems", ISBN 0-7803-1145-0, IEEE Press, 1995, pp. 37-53 and 347-353.

Kindly replace the paragraph beginning at page 19, line 12, with the following amended paragraph:

According to the invention, the parameters E_1, E_2, Z_{1e}, Z_{2e} and the line parameters are continuously updated from measurements taken by the phasor measurement units 1,1',1'',1''', i.e. including remote phasor measurement units 1'',1'''. A general procedure for determining network parameters from distributed phasor measurements is described in EP Publication EP 1 324 455 A1 (application No. 01811253.2), filed 2001-12-21. The protection scheme e.g. according to the Xia et al. paper cited above is then applied, but using the updated values of E_1, E_2, Z_{1e}, Z_{2e}.